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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,261	02/09/2004	Gyana Ranjan Parija	YOR920030256US1	8578

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EXAMINER

FREJD, RUSSELL WARREN

ART UNIT PAPER NUMBER

2128

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/773,261	<b>Applicant(s)</b> PARIJA ET AL.	
	<b>Examiner</b> Russell Frejd	<b>Art Unit</b> 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

In re Application of: Parija et al.

***Examination of Application #10/773,261***

1. Claims 1-20 of application 10/773,261, filed on 9-February-2004, are presented for examination.

***Claim Rejections under 35 U.S.C. § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

- 2.1 Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The invention claims (claim 1 preamble), "*A computerized method for providing an optimization solution*".

- 2.2 MPEP Section 2106(IV)(B)(2)(b)(ii) provides that a statutory computer process is determined not by how the computer performs the process, but by what the computer does to achieve a practical application with a useful, concrete and tangible result. For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory, while a claimed process for digitally filtering noise employing the mathematical algorithm is statutory. The long line of cases in this area that are referred to in MPEP Section 2106(IV)(B)(2)(b)(ii) exemplify this requirement, by utilizing in the claim language, terms such as controlling, executing, changing and removing. In view of the aforementioned requirement and the interim guidelines for 101 eligibility, the Examiner respectfully contends that the claim language of independent claims 1, 5, 8, 9, 13 and 14 do not claim a practical application with a tangible result, that language claiming: in claim 1:

In re Application of: Parija et al.

**receiving** (emphasis added) data for a process which is defined by a linear functional form, including variables  $y$ ,  $X_1$  and  $X_2$ ;

**minimizing**  $y$  with respect to  $X_1$ ; and;

**maximizing**  $y$  with respect to  $X_2$ , wherein maximizing  $y$  comprises a global optimum for the process.

**2.3** For at least these reasons, the Examiner respectfully posits that the claims of the present invention do not meet the criteria for a statutory process. Accordingly, the claims are determined to be a method for providing an optimization solution, consisting solely of mathematical operations, converting one set of numbers into another set of numbers, whereby the method does not manipulate appropriate subject matter, and thus cannot constitute a statutory process (MPEP Section 2106(IV)(B)(2)(c)).

**2.4** The Examiner also posits that the method of the present invention is computer executable software code, or a program per se, consisting of software instructions that implement the method for providing an optimization solution. For at least this reason, the software instructions of the present invention do not manipulate appropriate subject matter, and thus cannot constitute a statutory process (MPEP Section 2106(IV)(B)(2)(c)).

### ***Claim Rejections under 35 U.S.C. § 102***

**3.** The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

**In re Application of: Parija et al.**

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**3.1** Claims 5, 8 and 14 are rejected under U.S.C. 102(b) as being anticipated by Whiffen, USP 6,496,741.

**3.2** Whiffen discloses :

Claim 5: an apparatus for calculating a global optimization to a minimum-maximum problem, said apparatus comprising: a first calculator to provide a plurality of minimum values; and a second calculator to locate a global optimum value, given said plurality of minimum values [col. 6, lines 28-36].

Claim 8: a system comprising: a memory [Fig. 12] containing data appropriate to a minimum-maximum problem; and an apparatus comprising: a first calculator to provide a plurality of minimum values; and a second calculator to locate a global optimum value, given said plurality of minimum values [col. 6, lines 28-36].

Claim 14: a computerized tool [Fig. 12] for providing a global solution to a minimum-maximum problem, said tool comprising: a linear programming solver to calculate a periphery of a polyhedron representing a region of all points that satisfy a linear constraint in a minimum-maximum problem [col. 6, lines 28-36; and Fig. 3, with col. 12, lines 8-33].

### ***Claim Objections***

**4.** Claims 6, 7, and 15-20 are objected to as being dependent upon a rejected base claim,

In re Application of: Parija et al.

but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Allowed Claims***

5. Claims 1-4 and 9-13 are deemed allowable over the prior art of record at this time, pending resolution of any rejections noted above.

***Response Guidelines***

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

**6.1 Any response to the Examiner in regard to this non-final action should be**

**directed to:** Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, or the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

**mailed to:** Commissioner of Patents and Trademarks  
P.O. Box 1450, Alexandria, VA 22313-1450

**or faxed to:** (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

**Date:** 24-July-2006

  
\_\_\_\_\_  
**RUSSELL FREJD  
PRIMARY EXAMINER**